

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## BEST AVAILABLE IMAGES

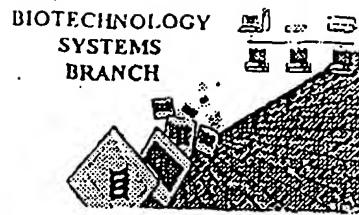
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/716,063  
Source: Fax  
Date Processed by STIC: 3/25/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT  
MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221

Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORRED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE SEE BELOW FOR ADDRESS

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply, including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses

1. EFS-Bio (<http://www.uspto.gov/cbc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/03):  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03



IFWO

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004

TIME: 09:10:42

Input Set : A:\Seq.Lst

Output Set: N:\CRF4\03252004\J716063.raw

3 <110> APPLICANT: BRUCHEZ, Marcel P.  
 4 LAI, Jennifer  
 5 PHILLIPS, Vince  
 6 WATSON, Andrew R.  
 7 WONG, Edith  
 9 <120> TITLE OF INVENTION: LOOP PROBE HYBRIDIZATION ASSAY FOR POLYNUCLEOTIDE ANALYSIS  
 11 <130> FILE REFERENCE: 5100-0703.01  
 13 <140> CURRENT APPLICATION NUMBER: 10/716,063  
 14 <141> CURRENT FILING DATE: 2003-11-17  
 16 <150> PRIOR APPLICATION NUMBER: 09/815,510  
 17 <151> PRIOR FILING DATE: 2001-03-22  
 19 <150> PRIOR APPLICATION NUMBER: 60/191,227  
 20 <151> PRIOR FILING DATE: 2000-03-22  
 22 <150> PRIOR APPLICATION NUMBER: 60/237,000  
 23 <151> PRIOR FILING DATE: 2000-09-29  
 25 <160> NUMBER OF SEQ ID NOS: 24  
 27 <170> SOFTWARE: PatentIn version 3.2  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 25  
 31 <212> TYPE: DNA  
 32 <213> ORGANISM: Artificial  
 34 <220> FEATURE:  
 35 <223> OTHER INFORMATION: mbD7S8A - Give source of genetic material  
 38 <220> FEATURE:  
 39 <221> NAME/KEY: misc\_feature  
 40 <222> LOCATION: (23)..(23)  
 41 <223> OTHER INFORMATION: N = (biotin dT)  
 43 <400> SEQUENCE: 1  
 W--> 44 gcagcccttt cccggaatgc gcnge 25  
 47 <210> SEQ ID NO: 2  
 48 <211> LENGTH: 30  
 49 <212> TYPE: DNA  
 50 <213> ORGANISM: Artificial  
 52 <220> FEATURE:  
 53 <223> OTHER INFORMATION: cmb D7S8A - Same from  
 55 <400> SEQUENCE: 2  
 56 tatgaccaggc attccgggaa aggaaagaaa 30  
 59 <210> SEQ ID NO: 3  
 60 <211> LENGTH: 27  
 61 <212> TYPE: DNA  
 62 <213> ORGANISM: Artificial  
 64 <220> FEATURE:  
 65 <223> OTHER INFORMATION: mbWNT5A - Same from

Does Not Comply  
 Corrected Diskette Needed  
 (Pg. 1-5)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004  
TIME: 09:10:42

Input Set : A:\Seq.Lst  
Output Set: N:\CRF4\03252004\J716063.raw

68 <220> FEATURE:  
 69 <221> NAME/KEY: misc\_feature  
 70 <222> LOCATION: (25)..(25)  
 71 <223> OTHER INFORMATION: N = (biotin dT)  
 73 <400> SEQUENCE: 3  
**W--> 74 gcacgcacaa actggcacac gacgngc** 27  
 77 <210> SEQ ID NO: 4  
 78 <211> LENGTH: 30  
 79 <212> TYPE: DNA  
 80 <213> ORGANISM: Artificial  
 82 <220> FEATURE:  
 83 <223> OTHER INFORMATION: **cmbWNT5A**  
 85 <400> SEQUENCE: 4  
 86 acggagatcg tggaccagg ttgttgcaag 30  
 89 <210> SEQ ID NO: 5  
 90 <211> LENGTH: 27  
 91 <212> TYPE: DNA  
 92 <213> ORGANISM: Artificial  
 94 <220> FEATURE:  
 95 <223> OTHER INFORMATION: **mbG**  
 98 <220> FEATURE:  
 99 <221> NAME/KEY: misc\_feature  
 100 <222> LOCATION: (24)..(24)  
 101 <223> OTHER INFORMATION: N = (biotin dT)  
 103 <400> SEQUENCE: 5  
**W--> 104 gcgagccacc aaagatgata tgcnccgc** 27  
 107 <210> SEQ ID NO: 6  
 108 <211> LENGTH: 30  
 109 <212> TYPE: DNA  
 110 <213> ORGANISM: Artificial  
 112 <220> FEATURE:  
 113 <223> OTHER INFORMATION: **cmbG**  
 115 <400> SEQUENCE: 6  
 116 aaagaaaata tcatcttgg tgtttcctat 30  
 119 <210> SEQ ID NO: 7  
 120 <211> LENGTH: 27  
 121 <212> TYPE: DNA  
 122 <213> ORGANISM: Artificial  
 124 <220> FEATURE:  
 125 <223> OTHER INFORMATION: **mbT**  
 128 <220> FEATURE:  
 129 <221> NAME/KEY: misc\_feature  
 130 <222> LOCATION: (24)..(24)  
 131 <223> OTHER INFORMATION: N = (biotin dT)  
 133 <400> SEQUENCE: 7  
**W--> 134 gcgagccacc aaatatgata tgcnccgc** 27  
 137 <210> SEQ ID NO: 8  
 138 <211> LENGTH: 30  
 139 <212> TYPE: DNA

*Same errors*

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004

TIME: 09:10:42

Input Set : A:\Seq.Lst

Output Set: N:\CRF4\03252004\J716063.raw

140 <213> ORGANISM: Artificial  
 142 <220> FEATURE:  
 143 <223> OTHER INFORMATION: cmbT  
 145 <400> SEQUENCE: 8  
 146 aaagaaaata tcatatttgg tgtttcstat 30  
 149 <210> SEQ ID NO: 9  
 150 <211> LENGTH: 25  
 151 <212> TYPE: DNA  
 152 <213> ORGANISM: Artificial  
 154 <220> FEATURE:  
 155 <223> OTHER INFORMATION: LDLr Loop A-5  
 157 <400> SEQUENCE: 9  
 158 cgagcatatg gtccttcc gctcg 25  
 161 <210> SEQ ID NO: 10  
 162 <211> LENGTH: 25  
 163 <212> TYPE: DNA  
 164 <213> ORGANISM: Artificial  
 166 <220> FEATURE:  
 167 <223> OTHER INFORMATION: LDLr Loop B-5  
 169 <400> SEQUENCE: 10  
 170 cgagcatatg gttcttcc gctcg 25  
 173 <210> SEQ ID NO: 11  
 174 <211> LENGTH: 31  
 175 <212> TYPE: DNA  
 176 <213> ORGANISM: Artificial  
 178 <220> FEATURE:  
 179 <223> OTHER INFORMATION: LDLr test A  
 181 <400> SEQUENCE: 11  
 182 cccagtgtgg aagaggacca tatcctctgg 31  
 185 <210> SEQ ID NO: 12  
 186 <211> LENGTH: 31  
 187 <212> TYPE: DNA  
 188 <213> ORGANISM: Artificial  
 190 <220> FEATURE:  
 191 <223> OTHER INFORMATION: LDLr test B  
 193 <400> SEQUENCE: 12  
 194 cccagtgtgg aagagaacca tatcctctgg 31  
 197 <210> SEQ ID NO: 13  
 198 <211> LENGTH: 20  
 199 <212> TYPE: DNA  
 200 <213> ORGANISM: Artificial  
 202 <220> FEATURE:  
 203 <223> OTHER INFORMATION: LDLrsb  
 205 <400> SEQUENCE: 13  
 206 tcaacagggttc cgatgtcaac 20  
 209 <210> SEQ ID NO: 14  
 210 <211> LENGTH: 19  
 211 <212> TYPE: DNA  
 212 <213> ORGANISM: Artificial

Same form

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004  
TIME: 09:10:42

Input Set : A:\Seq.Lst  
Output Set: N:\CRF4\03252004\J716063.raw

214 <220> FEATURE:  
 215 <223> OTHER INFORMATION: LDLrab  
 217 <400> SEQUENCE: 14  
 218 cagggtggc ctctcacac 19  
 221 <210> SEQ ID NO: 15  
 222 <211> LENGTH: 151  
 223 <212> TYPE: DNA  
 224 <213> ORGANISM: Artificial  
 226 <220> FEATURE:  
 227 <223> OTHER INFORMATION: Sequence spanning the D7S8 locus upper strand  
 230 <220> FEATURE:  
 231 <221> NAME/KEY: misc\_feature  
 232 <222> LOCATION: (50)..(50)  
 233 <223> OTHER INFORMATION: X Location of SNP  
 234 ~~X=C/G; Allele A~~  
 235 ~~X=T/A; Allele B~~  
 237 <400> SEQUENCE: 15  
 W--> 238 cttaggatgt tcctgtctca gggaccctga ctttattgtc ccccttcnn ggaatgctgg 60  
 240 tcctgacaca ataataaaag ctctgagaag gcagccattt ttgtatgctt tactccaggc 120  
 242 tacttctcaa ctgcagaac aggcttggc a 151  
 245 <210> SEQ ID NO: 16  
 246 <211> LENGTH: 151  
 247 <212> TYPE: DNA  
 248 <213> ORGANISM: Artificial  
 250 <220> FEATURE:  
 251 <223> OTHER INFORMATION: Sequence spanning the D7S8 locus lower strand  
 254 <220> FEATURE:  
 255 <221> NAME/KEY: misc\_feature  
 256 <222> LOCATION: (102)..(102)  
 257 <223> OTHER INFORMATION: X location of SNP  
 258 ~~X=C/G; Allele A~~  
 259 ~~X=T/A; Allele B~~  
 261 <400> SEQUENCE: 16  
 262 tgccaagccc tggctcgca gttgagaagt agcctggagt aaagcataca aaaatggctg 60  
 W--> 264 ctttctcaga gcttatatta ttgtgtcagg accagcattc cnggaaaggg gagcaataag 120  
 266 gtcaagggtcc ctgagacagg aacatcccta g 151  
 269 <210> SEQ ID NO: 17  
 270 <211> LENGTH: 19  
 271 <212> TYPE: DNA  
 272 <213> ORGANISM: Artificial  
 274 <220> FEATURE:  
 275 <223> OTHER INFORMATION: 76bp fragment PCR forward primer  
 277 <400> SEQUENCE: 17 19  
 278 gggaccctga ctttattgc  
 281 <210> SEQ ID NO: 18  
 282 <211> LENGTH: 19  
 283 <212> TYPE: DNA  
 284 <213> ORGANISM: Artificial  
 286 <220> FEATURE:

*Please use "N" instead of "X".*

*Please explain which nucleotide represents Allele A & B.*

*Please use "N" instead of "X".*

*Please explain which nucleotide represents Allele A & B.*

RAW SEQUENCE LISTING DATE: 03/25/2004  
 PATENT APPLICATION: US/10/716,063 TIME: 09:10:42

Input Set : A:\Seq.Lst  
 Output Set: N:\CRF4\03252004\J716063.raw

287 <223> OTHER INFORMATION: 76bp fragment PCR reverse primer  
 289 <400> SEQUENCE: 18  
 290 tggctgcctt ctcagact 19  
 293 <210> SEQ ID NO: 19  
 294 <211> LENGTH: 21  
 295 <212> TYPE: DNA  
 296 <213> ORGANISM: Artificial  
 298 <220> FEATURE:  
 299 <223> OTHER INFORMATION: 151bp fragment PCR forward primer  
 301 <400> SEQUENCE: 19  
 302 ctagggatgt tcctgtctca g 21  
 305 <210> SEQ ID NO: 20  
 306 <211> LENGTH: 20  
 307 <212> TYPE: DNA  
 308 <213> ORGANISM: Artificial  
 310 <220> FEATURE:  
 311 <223> OTHER INFORMATION: 151bp fragment PCR reverse primer  
 313 <400> SEQUENCE: 20  
 314 tgccaagccc tgttctgcga 20  
 317 <210> SEQ ID NO: 21  
 318 <211> LENGTH: 25  
 319 <212> TYPE: DNA  
 320 <213> ORGANISM: Artificial  
 322 <220> FEATURE: *SAME err*  
 323 <223> OTHER INFORMATION: mbD7S8B  
 326 <220> FEATURE:  
 327 <221> NAME/KEY: misc\_feature  
 328 <222> LOCATION: (23)..(23)  
 329 <223> OTHER INFORMATION: N = (biotin dT)  
 331 <400> SEQUENCE: 21  
 W--> 332 gcagcccttt cctggaatgc gengc 25  
 335 <210> SEQ ID NO: 22  
 336 <211> LENGTH: 30  
 337 <212> TYPE: DNA  
 338 <213> ORGANISM: Artificial  
 340 <220> FEATURE:  
 341 <223> OTHER INFORMATION: Complementary D7S8B *SAME err*  
 343 <400> SEQUENCE: 22  
 344 tatgaccaggc attccagaa agggaaagaaa 30  
 347 <210> SEQ ID NO: 23  
 348 <211> LENGTH: 24  
 349 <212> TYPE: DNA  
 350 <213> ORGANISM: Artificial  
 352 <220> FEATURE:  
 353 <223> OTHER INFORMATION: AminoD7S8A *- SAME err*  
 355 <400> SEQUENCE: 23  
 356 ttttttacca gcattccggg aaag 24  
 359 <210> SEQ ID NO: 24  
 360 <211> LENGTH: 24

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004  
TIME: 09:10:43

Input Set : A:\Seq.Lst  
Output Set: N:\CRF4\03252004\J716063.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 23  
Seq#:3; N Pos. 25  
Seq#:5; N Pos. 24  
Seq#:7; N Pos. 24  
Seq#:15; N Pos. 50  
Seq#:16; N Pos. 102  
Seq#:21; N Pos. 23

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/716,063

DATE: 03/25/2004

TIME: 09:10:43

Input Set : A:\Seq.Lst

Output Set: N:\CRF4\03252004\J716063.raw

L:44 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
L:74 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:60  
L:332 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0